

REMARKS

Favorable reconsideration of the present application is respectfully requested.

Claims 1-8 are presented for examination in this application.

The outstanding Office Action includes a rejection of Claims 1-8 under 35 U.S.C.

§103(a) as being unpatentable over Itoh et al (U.S. Patent No. 5,412,408, Itoh).

Before discussing the outstanding rejection of Claims 1-8 over Itoh, it is believed that a brief review of the present invention as set forth in the last response would again be helpful so it is repeated as follows:

In this regard, the present invention is directed to an Image forming apparatus providing non-circular beam spots overlapped in a sub-scan direction of the apparatus so as to form a central dot on a photosensitive layer. The overlapped non-circular beam spots are provided with a beam spot diameter W_s defined by $1/e^2$ of the maximum value in the exposure distribution of the beam spot, such that a ratio between W_s and an interval L between adjacent scan lines satisfies the formula $1.2 < W_s/L < 4.5$ to thereby form the central dot between adjacent scan lines in a manner that stabilizes the formed dots to increase resolution in the sub-scan direction as discussed on line 8 of page 7 through line 5 of page 8 of the specification, for example.

The outstanding rejection of Claims 1-8 over is Itoh traversed because no *prima facie* case of obviousness has been established that demonstrates the subject matter of these claims considered as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made.

Itoh does not teach or suggest that "all dots forming parts of images formed on the photosensitive layer of the photosensitive body are formed at a center between adjacent light fluxes as a result of the adjacent light fluxes being overlapped with one another in a sub-scan direction of the apparatus," much less the claim relationship of $1.2 < W_s/L < 4.5$ to thereby form these image dots between adjacent scan lines in a manner to increase

the claimed dot formation in order to improve resolution.

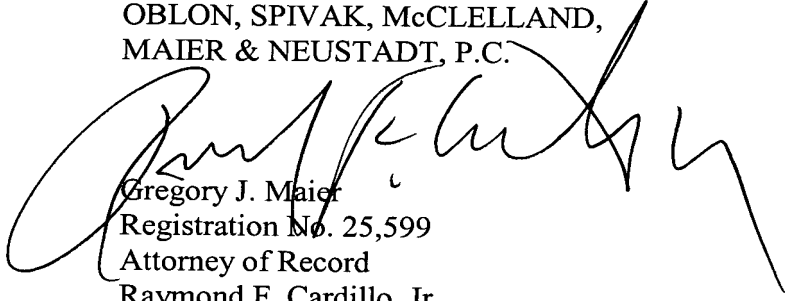
Thus, as there is no suggestion in Itoh of a ratio of a static beam-spot diameter W_s in the sub-scan direction on the surface of said photosensitive body defined by $1/e^2$ of the maximum value in the exposure distribution of the beam spot to an interval L between adjacent scan lines satisfying the formula $1.2 < W_s/L < 4.5$ to thereby form dots between adjacent scan lines in a manner to increase resolution, In re Antonie, 195 USPQ 6, 8-9 (CCPA 1977) is relevant as noting the non-applicability of In re Aller under these circumstances as follows:

In *In re Aller*, 42 CCPA 824, 220 F.2d 454, 105 USPQ 233 (1955), the court set out the rule that the discovery of an optimum value of a variable in a known process is normally obvious. We have found exceptions to this rule in cases where the results of optimizing a variable, which was known to be result effective, were unexpectedly good. *In re Waymouth*, 499 F.2d 1273, 182 USPQ 290 (CCPA 1974); *In re Saether, supra*. This case, in which the parameter optimized was not recognized to be a result-effective variable, is another exception.

As no further issues are believed to remain outstanding relative to this application, it is respectfully submitted that this application is clearly in condition for formal allowance, and an early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

Please amend the claims as follows:

--1. (Amended) An image forming apparatus, comprising:

a photosensitive body [having a photosensitive layer]; and

an optical scanning device having a deflector deflecting a light flux emitted from a light source, and scanning the surface of said photosensitive body by the thus-deflected light flux,

wherein said apparatus is configured such that [a dot is] all dots forming parts of images formed on the surface of the photosensitive body are formed at a center between adjacent light fluxes as a result of the adjacent light fluxes being overlapped with one another in a sub-scan direction, and

wherein a ratio of a static beam-spot diameter W_s in the sub-scan direction on the surface of said photosensitive body defined by $1/e^2$ of the maximum value in the exposure distribution of the beam spot to an interval L between adjacent scan lines satisfies the following formula:

$$1.2 < W_s/L < 4.5$$

7. (Amended) An image forming apparatus, comprising:
a photosensitive means [having a photosensitive layer]; and
an optical scanning device having a deflecting means for deflecting a light flux emitted by light emitting means, and scanning the surface of said photosensitive body by the thus-deflected light flux,

wherein [a dot is] all dots forming parts of images formed on the photosensitive layer of the photosensitive body are formed at a center between adjacent light fluxes as a result of the adjacent light fluxes being overlapped with one another in a sub-scan direction, and

wherein [said apparatus is configured such that] a ratio of a static beam-spot diameter W_s in the sub-scan direction on the surface of said photosensitive body defined by $1/e^2$ of the maximum value in the exposure distribution of the beam spot to an interval L between adjacent scan lines satisfies the following formula:

$$1.2 < W_s/L < 4.5$$

to thereby form said dots between adjacent scan lines in a manner to increase resolution in the sub-scan direction.--